

25. (expires 4/12) The message below was encrypted using RSA with a key having the base

$$n = 27606985387162255149739023449107931668458716142620601169954803000803329$$

and the exponent

$$e = 95541407564551142884433930859007846184688349517132011538195190379009$$

The plaintext was represented in printable ASCII (base 128) in blocks of 32 letters at a time, and no padding.

[763135969033211128596541748452730974762878358020265079326172641096139,
 20879815087895860022209511826785258055291427630017621830659043784235896,
 5574407969259647015040456167101346596832809056832375987068556624523356,
 21224197154621559219944504912186017011922165030059099210273090531937808,
 12551200560613077704270621749705141076270903046687425935996313400405711,
 18867900358254708499609170144443800027105466906756657749060030225245438,
 4496337993898968047719657088708600524228317595964529102107251777431690,
 9235737130358789283717978176700453123390494678379655510638922958288836,
 3231140561089428768657095292397775917600836123018152094745253390870101,
 82840704708021038125667422565345512548754665959685316382831252550171,
 21039656037112093852283327710959368295150841772122729298435513871462186,
 12041411940954720052070811665940863639535876777498117250838013124490438,
 9413438705357919431318689662458482172376428983918258919377408820020874,
 24344582781105714296470393649838967454596532389718150304278089340495219,
 11666627210237277694133981546667501319351377137704324464898696799000305,
 7678728878370382868719828867510796171125030253163810615836093095505785,
 5850521474451619072915665399042845983658256530488470900878348493299278,
 12796063700367369818580350073200291698274548230387522514837595194567646,
 991710678121376154332316965121228090363454988579278882664135678580849,
 5448263916134504769205437219736103649161232816051564930186689344069733,
 331683831213526862116612352660410874927161591545716084674509520546695,
 20911409982862166039437808848985365838241145413477157865204152349571315,
 8446725165717024647474699066623651985526914825302054942325942578083958,
 14694800659219414119256346254478510304289471490144936213050026188930109,
 7890485067636181638866077827274071592238401748222991089801197812460720,
 21236486045506721843702186793969054222520252187939247582471851381880906,
 26957526821518528986780575261941374306276897675892965905302075045418371,
 24677240511277808315835169523848692305481480201233529864615262657333913,
 23499633482301313755682672041801597278928819855701032620066320680181087,
 372227370145476230598908963364257918250207931059342487415859925223516]

Decrypt the message. (Hint: 70 decimal digits is too small to be secure.) So you don't have to retype everything, the values of n , e , and the encrypted message are in the file [formulacrypt.txt](#) on the class web page.